1   Please substitute the following abstract fot the abstract prently in the application.

2   ABSTRACT

3   (Substitute)   A method of diagnosing semiconductor device functional

4   testing failures by combining deterministic and functional testing to create a new test pattern

5   based on the functional failure by determining the location of and type of error in the failing

6   circuit. This is accomplished by identifying the failing vector during the functional test,

7   observing the states of the failed device by unloading the values of the latches from the

8   LSSD scan chain before the failing vector, generating a LOAD from the unloaded states of

9   the latches, applying the generated LOAD as the first event of a newly created independent

10 LSSD deterministic pattern, applying the primary inputs and Clocks that produced the

11 failure to a correctly operating device, unloading the output of the correctly operating device

12 to generate a deterministic LSSD pattern; and applying the generated deterministic LSSD

13 pattern to the failing device to diagnose the failure using existing LSSD deterministic tools.

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